NITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Offi-

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DATE MAILED: 12/18/2009

ISIS-2169

NOTICE OF ALLOWANCE AND FEE(S) DUE

32650 759n 12/18/2009 WOODCOCK WASHBURN LLP CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET

PHILADELPHIA, PA 19104-2891

08/612.661

EXAMINER POLANSKY, GREGG PAPER NUMBER ARTHMU 1614

7831

APPLICATION NO. FILING DATE FIRST NAMED INVENTOR ATTORNEY DOCKET NO. CONFIRMATION NO LEIF CHRISTENSEN

03/08/1996 TITLE OF INVENTION: SUBSTITUTED NUCLEIC ACID MIMICS

APPLN, TYPE SMALL ENTITY ISSUE FEE DUE PUBLICATION FEE DUE PREV. PAID ISSUE FEE TOTAL FEE(S) DUE DATE DUE	nonprovisional	NO.	\$1510	so.	\$0	\$1510	03/18/2010
	APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown

B. If the status above is to be removed, check box 5b on Part B -Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

INSTRUCTIONS: This appropriate. All further indicated unless correcte maintenance fee notificat	form should be used f correspondence includir d below or directed oth ions.	or transmit ig the Pater ierwise in I	tting the ISSI nt, advance o Block 1, by (JE FEE and PUBLIC rders and notification a) specifying a new of					ould be completed where correspondence address as rate "FEE ADDRESS" for
CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)					Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.				
32650	7590 12/18							of Mailing or Transı	
WOODCOCK WASHBURN LLP CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET					I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.				
PHILADELPHIA	A, PA 19104-2891				Г				(Depositor's name)
									(Signature)
									(Date)
APPLICATION NO.	FILING DATE			FIRST NAMED INVENTOR			ATTO	RNEY DOCKET NO.	CONFIRMATION NO.
08/612,661	03/08/1996			LEIF CHRISTENS	EN			ISIS-2169	7831
TITLE OF INVENTION:	SUBSTITUTED NUC	LEIC ACIE	MIMICS						
APPLN, TYPE	SMALL ENTITY	ISSUE	FEE DUE	PUBLICATION FEE I	DUE	PREV. PAID ISSUI	E PEE	TOTAL FEE(8) DUE	DATE DUE
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				(2) the name of a	(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patient attorneys or agents. If no name is 3				
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.				2 registered paten listed, no name w	t attor ill be	neys or agents. If printed.	no nam	e is 3	
3. ASSIGNEE NAME AT									
PLEASE NOTE: Unk recordation as set forth	ess an assignee is ident n in 37 CFR 3.11. Comp	ified below detion of th	, no assignee is form is NO	data will appear on i T a substitute for filin	the pa g an a	tent. If an assign issignment.	ee is id	entified below, the do	cument has been filed for
(A) NAME OF ASSIC	SNEE			(B) RESIDENCE: (CITY	and STATE OR C	OUNT	RY)	
Please check the appropri	ate assignee category or	categories	(will not be p	inted on the patent):	۵	Individual 🗖 Co	rporati	on or other private gro	up entity Government
4a. The following fee(s) a	re submitted:		4			se first reapply ar	y prev	iously paid issue fee s	hown above)
☐ Issue Fee ☐ A check is encle ☐ Publication Fee (No small entity discount permitted) ☐ Payment by cre						i. Form PTO-2038		-11	
Advance Order - #		ermittea)		The Director is h	ereby	authorized to char	ge the i	equired fee(s), any def	iciency, or credit any
5. Change in Entity Stat				overpayment, to	Depor	sit Account Numbe	r	(enclose ar	extra copy of this form).
	s SMALL ENTITY state		FR 1.27.	☐ b. Applicant is n	o lons	er claiming SMAI	L ENT	TTY status. See 37 CF	R 1.27(g)(2).
NOTE: The Issue Fee and interest as shown by the r	Publication Fee (if requeords of the United Sta	uired) will r tes Patent a	not be accepte and Trademark						e assignee or other party in
Authorized Signature						Date			
Typed or printed name	,					Registration N	lo		
This collection of informa an application. Confident submitting the completed this form and/or suggestic Box 1450, Alexandria, V Alexandria, Virginia 223	ation is required by 37 C iality is governed by 35 application form to the ons for reducing this bu- irginia 22313-1450. DC 13-1450.	FR 1.311. U.S.C. 122 USPTO. T rden, should NOT SEN	The information of the control of th	on is required to obtai 1.14. This collection depending upon the e Chief Information C COMPLETED FORM	n or n is esti indiv Office IS TO	etain a benefit by t imated to take 12 r idual case. Any co r, U.S. Patent and THIS ADDRESS	he publ ninutes mment Traden 5. SENI	ic which is to file (and to complete, including s on the amount of tin hark Office, U.S. Depa D TO: Commissioner f	by the USPTO to process) g gathering, preparing, and se you require to complete rtment of Commerce, P.O. or Patents, P.O. Box 1450,

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/612,661	03/08/1996	LEIF CHRISTENSEN	ISIS-2169	7831
32650	7590 12/18/2009		EXAM	IINER
WOODCOCK	WASHBURN LLP	POLANSK	Y, GREGG	
CIRA CENTRE,			ART UNIT	PAPER NUMBER
2929 ARCH STF PHILADELPHIA	EET A. PA 19104-2891		1614	

Determination of Patent Term Extension under 35 U.S.C. 154 (b)

(application filed after June 7, 1995 but prior to May 29, 2000)

The Patent Term Extension is 489 day(s). Any patent to issue from the above-identified application will include an indication of the 489 day extension on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Extension is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.	Applicant(s)	
08/612,661	CHRISTENSEN ET AL.	
Examiner	Art Unit	
GREGG POLANSKY	1614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address-All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included
herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS
NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative
of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1. This communication is responsive to 3/12/01.
- The allowed claim(s) is/are 12-19,23,24 and 26.
- Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some* c) None of the:
 - 1. \(\sum \) Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____
 - Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: ____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
- CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.

 (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

Paper No./Mail Date _____,
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

- DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the
 attached Examiner's comment recarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. Notice of References Cited (PTO-892)
- Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3. Information Disclosure Statements (PTO/SB/08).
- Paper No./Mail Date See Continuation Sheet
 4. Examiner's Comment Regarding Requirement for Deposit
 of Biological Material
- 5. Notice of Informal Patent Application
- Interview Summary (PTO-413), Paper No./Mail Date ______.
- 7. X Examiner's Amendment/Comment
- 8. X Examiner's Statement of Reasons for Allowance
- Other <u>Appendix containing allowed claims</u>.

/Gregg Polansky/ /Ardin Marschel/
Examiner, Art Unit 1614 Supervisory Pater

Supervisory Patent Examiner, Art Unit 1614

 $Continuation \ of \ Attachment(s)\ 3.\ Information\ Disclosure\ Statements\ (PTO/SB/08),\ Paper\ No./Mail\ Date:\ 3/12/2001\ \&\ 1/10/2005.$

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Art Unit: 1614

EXAMINER'S COMMENTS

Prosecution had previously been suspended to investigate potential interference.
 After further consideration the Examiner has determined that an interference does not appear to exist. As such, prosecution is resumed.

- 2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 3/12/2001 has been entered.
- 3. Applicants' Information Disclosure Statements, filed 3/12/2001 and 1/10/2005, are acknowledged and have been reviewed. References 13-15 of the IDS filed 1/10/2005 were incorrectly designated as PCT documents. The country code for these references have been changed to EP. Further, reference 13 has been review only to the extent of the provided English language translation of the abstract, and references 14 and 15 have been reviewed only to the extent of the provided English language translation of the titles.

Drawings

 The drawings filed on 3/07/2001 are acceptable subject to correction of the informalities indicated as follows: the compounds labeled 2 and 3 are missing "N" Application/Control Number: 08/612,661

Art Unit: 1614

(nitrogen) in the structures. In order to avoid abandonment of this application, correction is required in reply to the Office action. The correction will not be held in abeyance.

REASONS FOR ALLOWANCE

5. The following is an Examiner's statement of reasons for allowance:

The invention is directed to admixtures of target molecules and nucleic acid mimics, in the form of PNA polymers containing at least one sterically bulky substituent on at least one base in said polymer. The prior art of record neither teaches nor suggests such sterically bulky substituents attached to the bases therein. It is additionally noted that the independent claim 26, renumbered as claim 1, requires that the subject matter be an admixture with target molecules. It is understood that all dependent claims also require the admixture limitation therein due to their dependence directly or indirectly from claim 26, now renumbered as claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREGG POLANSKY whose telephone number is (571)272-9070. The examiner can normally be reached on Mon-Thur 9:30 A.M. - 7:00 P.M. EST.

Art Unit: 1614

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin H. Marschel can be reached on (571) 272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregg Polansky/ Examiner, Art Unit 1614

/Ardin Marschel/ Supervisory Patent Examiner, Art Unit 1614